American Association for the Advancement of Science
IMPROVING TEACHER KNOWLEDGE

The American Association for the Advancement of Science (AAAS) offers numerous programs to improve teacher knowledge; some have a professional development component while others are designed to be instructional resources for teachers. Each program is offered through an AAAS directorate, either Project 2061 or Education and Human Resources (EHR).

DC ACTS (EHR) is a coalition to reform science and mathematics education in the District of Columbia Public Schools (DCPS) so that all students can succeed. DC ACTS' partners, AAAS, the Carnegie Institution of Washington (CIW), and DCPS, focus their efforts on 21 elementary and secondary schools. Areas of concentration include: professional education in content and pedagogy; leadership programs; partnerships with parents community organizations, institutions of higher education, and businesses; district policies; teacher certification; and procedures for collection and analysis of data.

Digital Library Projects. Project 2061 is currently working with the University of Colorado to develop a strand map interface that will allow teachers who are working with a conceptual strand map to access digital collections of related information on learning goals, lesson plans, background information, and other educational resources. A second project—with the Harvard-Smithsonian Digital Video Library—draws on the video collection of the Harvard-Smithsonian Center for Astrophysics (CFA) to make its science education materials more accessible to teachers. **BEN (Biology Educators Network) Collaborative** is an EHR project that involves 11 professional societies and coalitions for biology education in providing educators with access to the digital library collections of the BEN partners. At present, the portal provides access to resources from four of the partners, including resources to be used for lectures, classroom assignments, and hands-on labs. The Collaborative recognizes different learning styles and cultural perspectives and encourages access for persons with disabilities.

Forum for School Science and Mathematics (EHR) brings together a variety of constituencies to discuss critical issues in science and mathematics education. A book series, This Year in School Science, now has 11 publications providing critical analyses of Forum topics. The next Forum will be in Seattle in February 2004.

Maryland MacArthur Project. In 1996, Project 2061 teamed up with Towson University to design new models for the preparation of K-12 science, mathematics, and technology teachers that would enable new teachers to help their students achieve high standards in these areas, in part by building consensus about reform among pre-service students, university faculty, and mentor teachers. A book about the project: *Agents of Change: How Universities Can Develop Science Literate Teachers* will be out in 2004.

Math Power (EHR). *Math Power* materials were created by teams of parents, mathematics teachers, mathematics professors, and community educators for use in school, at home, and in community-based organizations. *Math Power* emphasizes applications and problem solving, estimation, and conceptual understanding and engages students in hands-on work, group activities, in-depth exploration, interdisciplinary projects, and use of calculators and other tools.

Workshops on Using Project 2061 Principles and Tools. Workshops provide educators with practical guidance on how to use Project 2061's publications and tools—such as the *Atlas of Science Literacy*, and its curriculum-materials analysis procedure—to enhance classroom instruction and curriculum planning.

Science NetLinks (EHR) (www.sciencenetlinks.com) is part of the Marco Polo project and provides online access to more than 400 K-12 science lessons that are standards-based and created by educators and scientists. There are also online interactive activities designed to enhance science discovery in classrooms, a searchable collection of websites that have been reviewed according to a rigorous set of criteria, and a link to the Science Update radio show. Approximately 135,000 teachers use the site each month.